Work Order ID 99445 April-09-13 8:32:44 AM

Ship April 15

Item ID: D29 Revision ID:	974		Accept	*N900	040	100)*	Setup Sta	rt *N	S1*
Item Name: Pack	ķer _							Sto	p *N	S2*
	9/13 Start Qty: 8.00	*8*		Cust Item	ID:					
Required Date: 4/15 Reference:	5/13 Req'd Qty: 8.00	*8*		Customer:						
Approvals: Pro	ocess Plan: MC5	Date: /3 ~ 6 4	−69Tooling:	D	ate:		;	Run Sta	1/7	R1*
	C:		•		ate:			Sto	*N	R2*
Sequence ID/ Work Center ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr									
D2974	В									
100			0.00							
100	FLOW WATER JET					•	8	0		Jm13-4-9
Waterjet	Memo		0.00							<u> </u>
FLOW CNC Waterjet	1-Cut as po	er Dwg D2974								
304.040	Dwg Rev:	<u>_6</u> _	•		-					
	Prog Rev:_ 2-Deburr i	f necessary								
110	QC2-Inspect parts off	machine FAI/FAIB	0.00							
110							8	• •		JM13-4-5
QC Quality Control	Memo		0.00				. , ,			

										DQA:	Date	<u>.</u>
NCR: Y	es / No)			WORK ORDER NON-C	O	NFORI	MANCE / UP	PDATE	QA Closed:	Date	
					DISPOSITION				AGAINST D	EPARTMENT		:
Work Orde	er:]	1		المطابعة لمانات	_	٦	Water Jet	7
Part N	lo		······································		Rework Scrap Use-as-is		1	Skid-tube Machining noforming	Crosstube Small Fab Finishing		d. Eng. Coor. re/Packaging	Engineering Quality Other
NCR N	No				Work Order Update]		Large Fab	Composite]	Supplier	
Root				Descri	ption of work order update	Π	nitial	Ac	ction	Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Desc	cription	Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling			ľ									
Operator		İ										
Material						٠.	•					
Setup												
Other												
Process									•			
Supplier									•			
Training												
Unapproved			<u>.l</u>	L	-	<u> </u>	T CATE	CORY				<u> </u>
l a a dia					General	AUL	T CATE	GURY				
Landi	n g Gear Bendir	_			Bend		Grain		_	Ovalized		Pressure/Forced
	_	ช Not Conce	ntric to	~ F	BOM/Route		Hardwa	ro	<u> </u>	Over/Under	tolerance	Temperature/Cure
	Cracks			°′3	Broken/Damaged	\vdash	ł	on Incomplete	· -	Part incorre	-	Weld
		d/Crimped	İ	<u> </u>	Burrs	\vdash	ł ·	ions Incomplete/	/Unclear	Part Lost/M	<u> </u>	Wrong Stock Pulled
	Cuffs	u) Ci ii iipeu	,		Contamination	-	Mainte		-	Part Moved	33/11g	
	Heat T	reat		<u> </u>	Countersink	\vdash	Mislabe		<u> </u>	Positioned V	Vrong	•
	${f oxed{oxed}}}}}}}}}}}}}}}}}}}}}}}}}}}}}$	tion Strip ir	n Tube	 -	Cut Too Short	-	Misread		 	Power Loss/		Other
	_	in Bend	. 1000		Drill Holes		Offset	.	<u> </u>	اردون د		1
	—	Waves in	Extrusio	n	Drawing	—	4	Calibration	•			

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

April-09-13 8:32:44 AM

Item ID: D2974

Required Date: 4/15/13

Accept

N900040100

Setup Start

Item Name: Packer

Revision ID:

4/09/13

Start Qty: 8.00 Req'd Qty: 8.00

Cust Item ID:

Customer:

Reference:

Start Date:

Approvals:

Run

Qty

QC: ____ Date:

Process Plan:

Date: Tooling:

SPC (Y/N):

Date: Date:

Sequence ID/ **Work Center ID** Operation Description QC8- Inspect parts - second check

Set Up/ **Run Hours** Tool ID

Tool # Plan Code

Accept Qty

Reject Reject Number Stamp

Insp.

Page 2

120

120

Quality Control

Memo

130

NC BRAKE

0.00

130 Brake NC

Memo

0.00

Memo

Brake NC

Deburr and form on brake using DT8178 and DT8261as per Dwg D2974

140

140

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

0.00

											DQA:	Date:	
NCR: Y	⁄es	/ No				WORK ORDER NON-C	10:	NFORI	MANCE / UP	DATE	QA Closed:	Date:	
	-										· ·		
Work Orde	er:					DISPOSITION				AGAINST DI	EPARTMENT	/PROCESS	
Part N	- ۔ ۱۰۰					Rework Scrap Use-as-is Work Order Update		1	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	-1	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update		Initial	Act	tion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved													
							AUL	T CATE	GORY				
Landir		Bending Centre No Cracks Crushed/O Cuffs Heat Trea Inspection Ripples in	Crimped at n Strip in ı Bend	Tube		General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Instruct Mainte Mislabe Misread Offset	ion Incomplete ions Incomplete/U enance eled	Unclear	Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ct sssing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

170
Packaging

Packaging

April-09-13 8:32:44 AM Item ID: D2974 Accept *N900040100* Setup Start **Revision ID:** Item Name: Packer Start Qty: 8.00 **Start Date:** 4/09/13 **Cust Item ID:** Required Date: 4/15/13 Req'd Qty: 8.00 **Customer:** Reference: Run Process Plan: _____ Date: ____ Approvals: Tooling: Date: Stop Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reject Reject Insp. Work Center ID Description **Run Hours** Code Qty Qty Number Stamp 150 0.00^{-} *150* HandFinish 0.00 Hand Finishing Coat entire top concave surface with a layer or rockguard as per dwg A/R Rockguard batch: 125226 160 QC3- Inspect Part Finish 0.00 *160* QC 0.00 Memo Quality Control Identify as per dwg & Stock Location: 170

0.00

Memo

NCR: Yes / No	WORK ORDER NON-CON	DQA: FORMANCE / UPDATE QA Closed:
Work Order:	DISPOSITION	AGAINST DEPARTMENT/PR
WORK Order.	Rework	Skid-tube Crosstube
Part No.	Scrap	Machining Small Fab Prod. E

										QA Closed:	Date):
Work Ordei	r:	1 12			DISPOSITION				AGAINST DEF	PARTMENT	PROCESS	
Part No					Rework Scrap Use-as-is Work Order Update		ا Therm	Machining S noforming S	Crosstube Small Fab Finishing composite		Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update	Ini	itial	Action		Sign &		
Cause	Date	Step	Qty	•	or Non-conformance	Chie	ef Eng	Description	ion	Date	Verification	QC Inspector
quip/Tooling Operator Material etup Other rocess upplier raining												·
Inapproved	<u> </u>	<u> </u>	l	L	F	AULT	CATE	GORY	I			
Landin				<u> </u>	General							
	Bending Centre No Cracks Crushed/ Cuffs Heat Trea Inspectio Ripples ir Torque W Turning S	Crimped at n Strip in n Bend Vaves in I	Tube		Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing Finish		nstruct Mainte Mislabe Misreac Offset Out of C	on Incomplete ions Incomplete/Unck nance led	ear	Ovalized Over/Under Part Incorrec Part Lost/Mis Part Moved Positioned W Power Loss/S	t ssing	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	Wave/Tw	vist in Tul	be	Γ	Folio		Outside	Dimensions				

Date:

April-09-13 8:32:44 AM

120

Quality Control

QC

Item ID: D2974 Accept *N900040100* Setup Start **Revision ID:** Item Name: Packer Start Qty: 8.00 **Start Date:** 4/09/13 Cust Item ID: Required Date: 4/15/13 Req'd Qty: 8.00 **Customer:** Reference: Run Tooling: Process Plan: Date:____ Approvals: Date: Stop Date: _____ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Reject Reject Tool # Plan Accept Insp. Work Center ID Description **Run Hours** Code Qty Qty Number Stamp 180 QC21- Final Inspection - Work Order Release 0.00

0.00

Memo

MF 13-4-15

MC= 13-04-15

								MANCE / UPDA		QA Closed:	Date:	
er: _					DISPOSITION	1		دادنا دراه		PARTMENT		Engineering
No					Scrap Use-as-is Work Order Update	٦	ا Therm	Machining noforming	Small Fab Finishing		d. Eng. Coor.	Quality Other
				Descri	ption of work order update	Ini	tial	Action	1	Sign &		
	Date	Step	Qty	(or Non-conformance	Chie	f Eng	Descript	ion	Date	Verification	QC Inspector
						AULT	CATE	GORY				
	Bending Centre No Cracks Crushed/G Cuffs Heat Trea Inspection Ripples in Torque W	Crimped t n Strip in Bend 'aves in E	Tube xtrusio		Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing	Hin In M	ardwa Ispecti Istruct Mainte Mislabe Misread Iffset Jut of C	on Incomplete ions Incomplete/Uncl nance led I	lear	Over/Under of Part Incorrect Part Lost/Mis Part Moved Positioned W	st ssing /rong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	lo	ng Gear Bending Centre No Cracks Crushed/O Cuffs Heat Trea Inspection Ripples in Torque W	Date Step Date Step Date Step Date Step Date Step Date Step Date Step Date Step	Date Step Qty Date Step Qty Date Step Qty Date Step Qty Date Step Qty Date Step Qty Date Step Qty Date Step Qty Date Step Qty Date Step Qty Date Step Qty Date Step Qty Date Step Qty Date Step Qty Date Step Qty Date Step Qty Date Step Qty Date Step Qty Date Step Qty Date Step Qty	Descri Date Step Qty Descri Date Step Oty Rework Scrap Use-as-is Work Order Update Date Step Oty Description of work order update or Non-conformance Fing Gear General Bending Gentre Not Concentric to O/S BOM/Route Cracks Broken/Damaged Crushed/Crimped Burrs Cuffs Contamination Cuffs Contensink Cuffs Countersink Inspection Strip in Tube Ripples in Bend Ripples in Bend Drawing Torque Waves in Extrusion Rework Scrap Use-as-is Work Order Update Or Non-conformance Fing Gear General Bend BoM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing	Rework Scrap Use-as-is Work Order Update Unit or Non-conformance Chies Date Step Qty Description of work order update or Non-conformance Chies	Rework Scrap Use-as-is Work Order Update Or Non-conformance Chief Eng Date Step Qty Description of work order update or Non-conformance Chief Eng	Rework Skid-tube Machining Thermoforming Large Fab Companied Chief Eng Companied Compa	DISPOSITION Rework Scrap Wachining Small Fab Machining Thermoforming Large Fab Composite Composite Date Step Qty Description of work order update or Non-conformance Chief Eng Description Bending Send Bend Centre Not Concentric to O/S Cracks Broken/Damaged Inspection Incomplete Inspe	Rework Scrap Use-as-is Use-as-is Work Order Update Use-as-is Use-a	Processor	

Outside Dimensions

DQA:

Date:

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Wave/Twist in Tube

Folio

Work Order ID: 99445

Parent Item:

D2974

Parent Item Name: Packer

99445

D2974

Start Date: 4/09/13

Required Date: 4/15/13

Start Qty: 8.00

Required Qty: 8.00

Comments:

A00.05.30New IssueEC

A06.11.20New IssueEC

DWG REV.B DD VERF:JLM

IPP REV:C 13.04.08 AS PER

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S20GA		Purchased	No			100	sf	386.6500	0.025	0.210526	<u> </u>	·—·····	
M30489A	GA								**	0.2	5		Jn13-4-9

M304516GA 304.063"

Location	Loc Qty	Loc Code
MAT020	386.65	
124029	117.15	
124956	269.5	

124572

											DQA:	Date	e:
NCR:	⁄es	/ No				WORK ORDER NON-	COI	NFOR	MANCE / UP	DATE	QA Closed:	Date	. ,
			·				ļ		· · · · · · · · · · · · · · · · · · ·				`
Work Orde	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part N	- No					Rework Scrap Use-as-is Work Order Update			Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update	П	nitial	Ac	tion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier					Na Carlo								
Training	Н									-			
Unapproved	Ш			1	1		<u> </u> Δ111	T CATE	GORY		<u> </u>	<u> </u>	
Landi	nø G	iear				General		CAIL	-		<u> </u>		
		Bending			Γ	Bend		Grain			Ovalized		Pressure/Forced
	П	Centre No	ot Conce	ntric to	o/s	BOM/Route		Hardwa	ire		Over/Under	tolerance	Temperature/Cure
!		Cracks				Broken/Damaged		Inspect	ion Incomplete		Part Incorre	ct _	Weld
		Crushed/	Crimped			Burrs		instruct	ions Incomplete/	Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
		Cuffs	•			Contamination		Mainte		· · L	Part Moved		
	$\boldsymbol{\vdash}$	Heat Trea			<u></u>	Countersink	\vdash	Mislabe		·	Positioned V		¬
	-	Inspectio		Tube	<u> </u>	Cut Too Short	\vdash	Misread	i	<u>L</u> .	Power Loss/	Surge	Other
	-	Ripples in			Ĺ	Drill Holes		Offset		•		· · · · · · · · · · · · · · · · · · ·	
	1	Torque W	laves in E	Extrusio	n i	Drawing	1.	Out of	Calibration				

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish Folio

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DART AEROSPACE LTD	Work Order:	99445
Description: Packer	Part Number:	D2974
Inspection Dwg: D2974 Rev: A B SUTS		Page 1 of 1

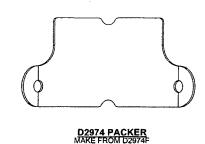
FIRST ARTICLE INSPECTION CHECKLIST

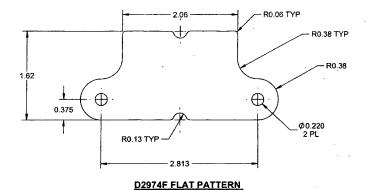
X First Article Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.220	+0.005/-0.001	0,222	-	,	U	Jemoi
0.375	+/-0.010	0,375	-		υ	
1.62	+/-0.030	1.624	_		V	
2.06	+/-0.030	2 065	-		V	
2.813	+/-0.010	2.816	_		V	
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		cAc.		
Measured by:	To	Audited by:	Prototype Approval:	N/A
Date:	13-4-9	Date: 13 4 10	Date:	N/A

Rev	Date	Change	Revised by	Approved
Α	08.11.27	New Issue	KJ/EC	<i>Z</i>





R1.77 -> **6**8

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UNCONTR

SUBJECT T

V. 1111

V. (27.11

NO 99445 MG

13-04-09

В	FORMAT TO CURRENT STANDARD, AISI 304SS WAS 5052H-32 OR 6061-76, REMOVE FINISH NOTE, ADD NOTE 8, ROCKGUARD COATING (ZN A8-1), REF CIR 12-13			12.12.14
A,	NEW RELEASE			00.03.15
REV.	DESCRIPTION		BY	DATE
		_ 4 4 4 _ 4 _ 4 _ 4 _ 4 _ 4 _		

DART AEROSPACE USA, INC. DRAWN DB DRAWING NO. D2974 CHECKED MB REV. B MFG. APPR DD_ SHEET 1 OF 1 TITLE APPROVED SCALE **PACKER** DE APPR.

DATE 12.12.14

NOTES:

1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET PER AMS 5513 OR 5524
OR ASTM A240 OR ASME SA240
20 GAUGE (0.040 THICK), REF. DART SPEC. M304S20GA
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.010 TO 0.020 MAX
6) IDENTIFICATION: IDENTIFY WITH P/N D2974 AND B/N AS PER DART QSI 044 6.1 (FINE POINT PAINT MARKER)
7) WEIGHT: 0.05 Ibs.
8) COAT ENTIRE TOP (CONCAVE) SURFACE WITH A LAYER OF PLUS ONE ROCKGUARD 4714, 0.020-0.040 THICK